OIPE
SEP 27 2005
PATENT & TRADEMARK OFFICE
IAP13

REPLACEMENT DRAWING

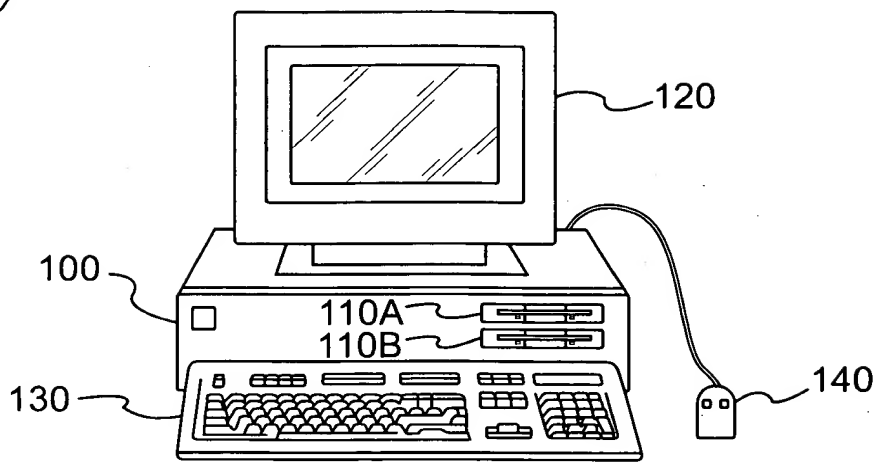


FIG. 1A

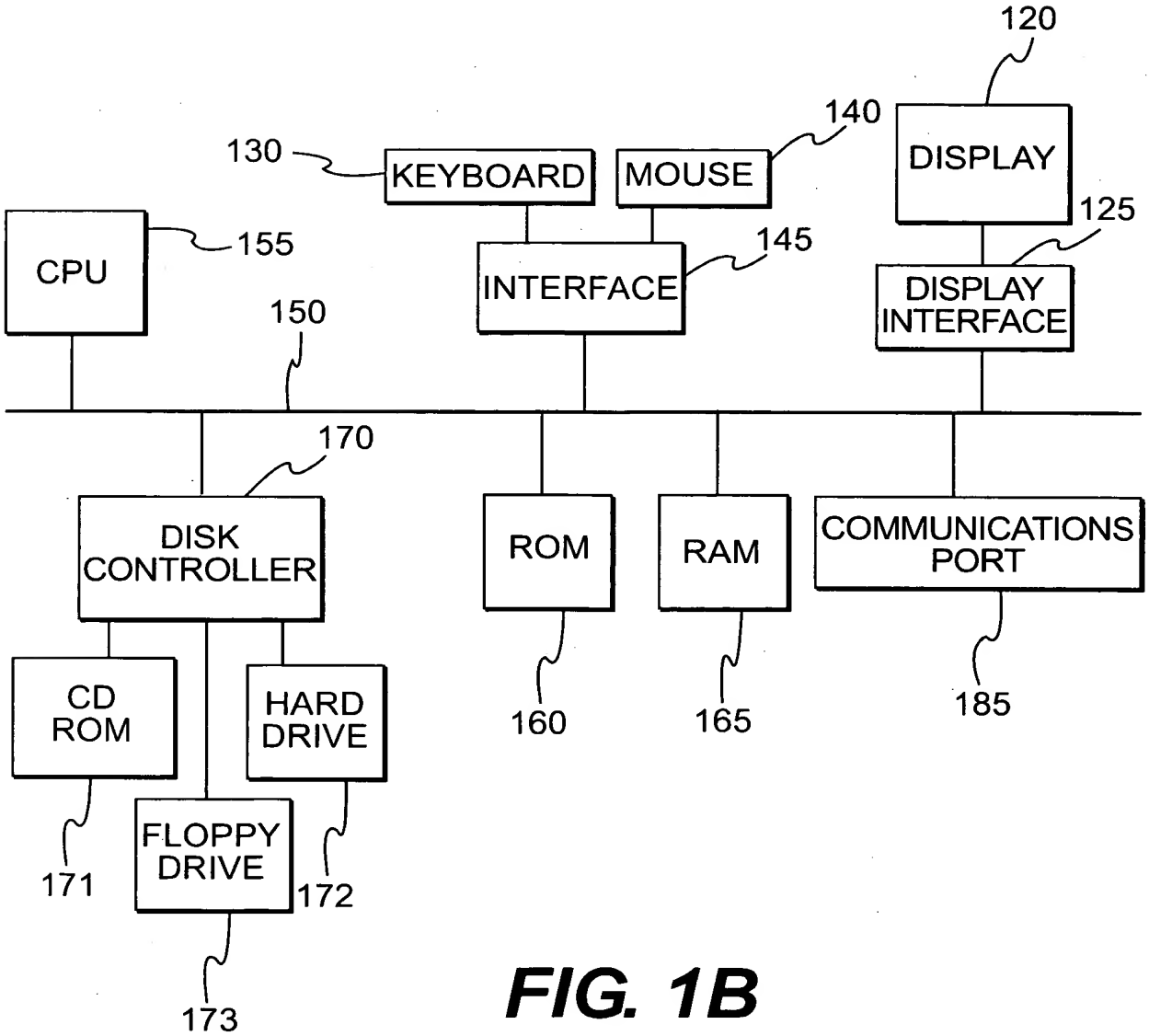


FIG. 1B

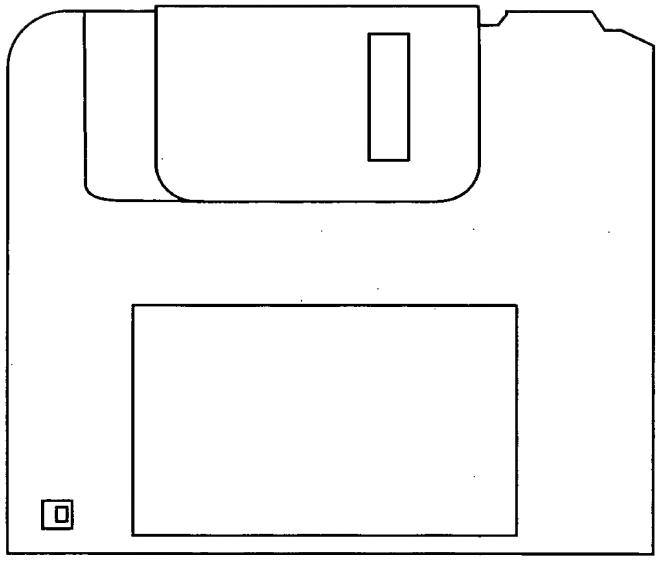

FIG. 1C

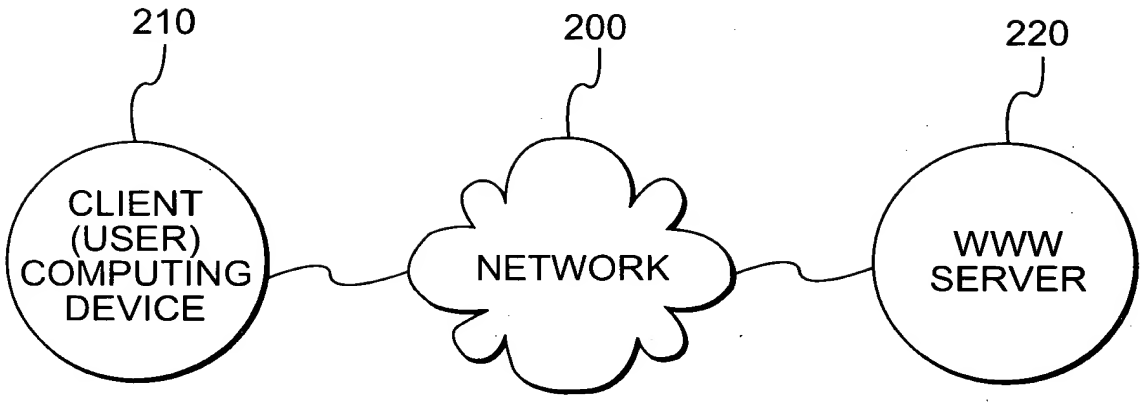
210
200
220
CLIENT (USER) COMPUTING DEVICE
NETWORK
WWW SERVER

FIG. 2A

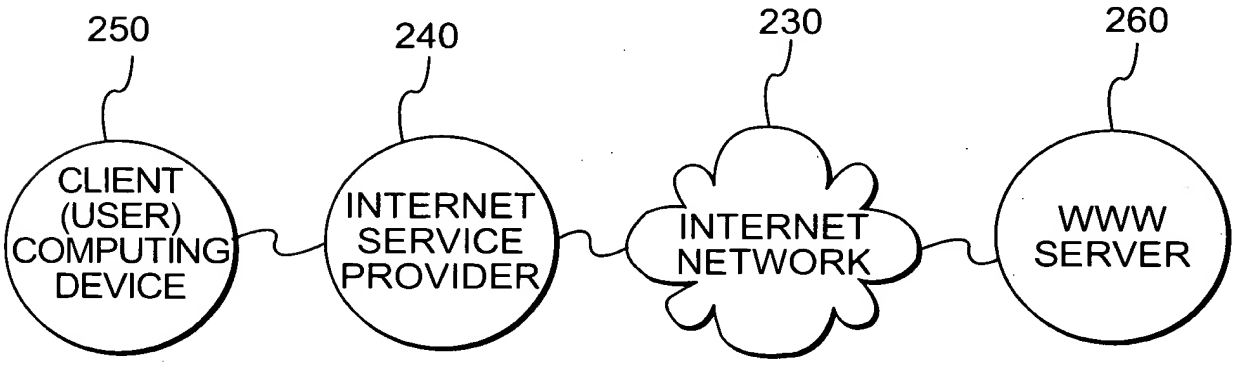
250
240
230
260
CLIENT (USER) COMPUTING DEVICE
INTERNET SERVICE PROVIDER
INTERNET NETWORK
WWW SERVER

FIG. 2B

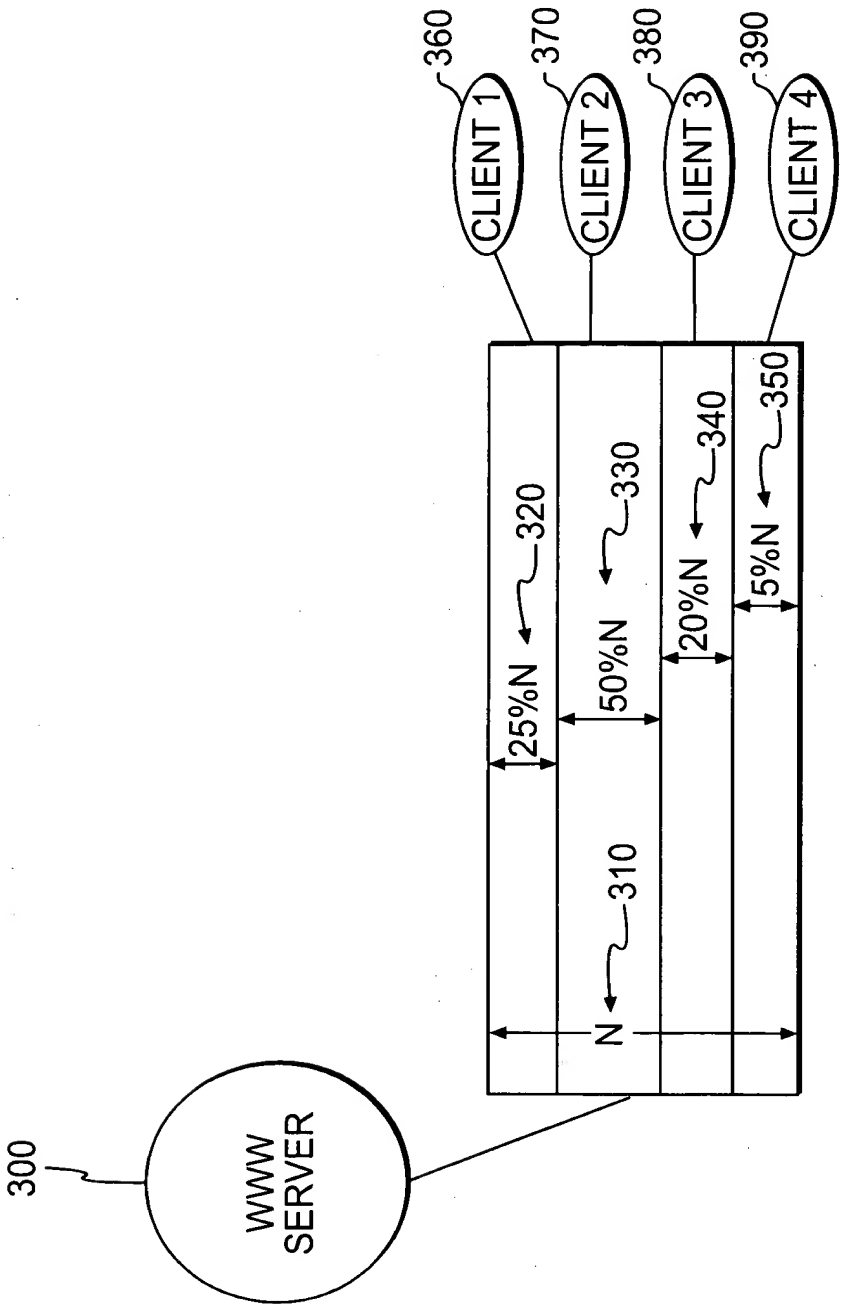
300
WWW SERVER
N
310
25%N
320
50%N
330
20%N
340
5%N
350
CLIENT 1
360
CLIENT 2
370
CLIENT 3
380
CLIENT 4
390

FIG. 3

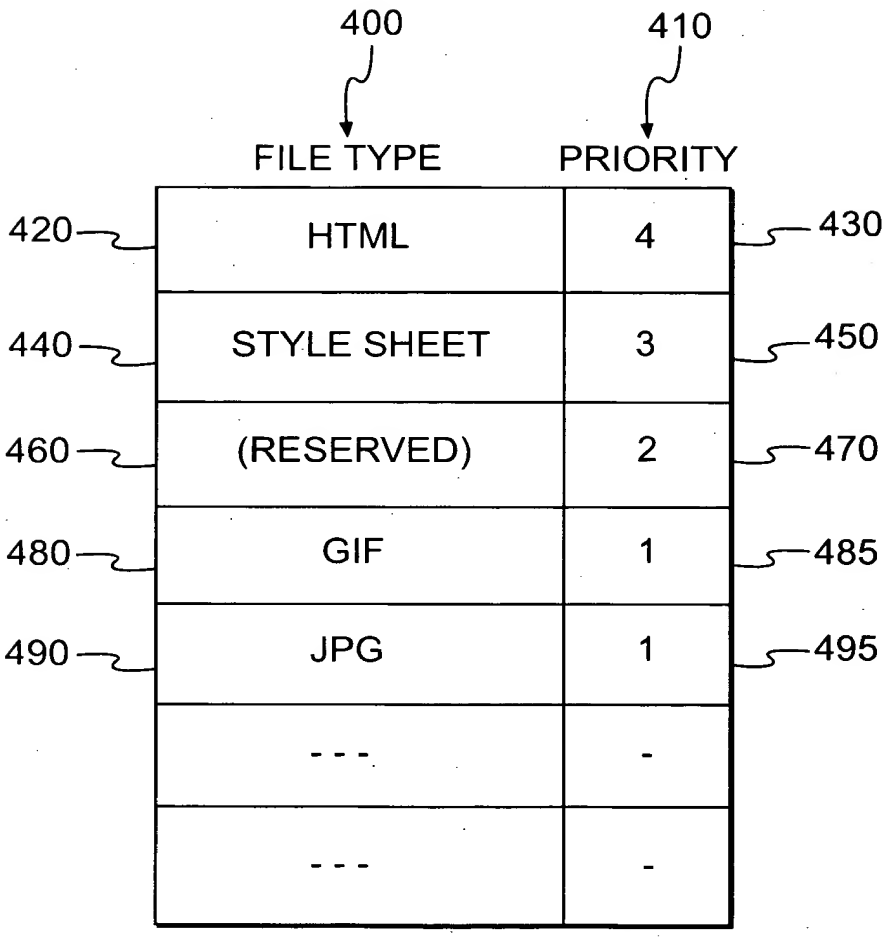
400
410
FILE TYPE
PRIORITY
420
HTML
4
430
440
STYLE SHEET
3
450
460
(RESERVED)
2
470
480
GIF
1
485
490
JPG
1
495
- - -
-
- - -
-

FIG. 4

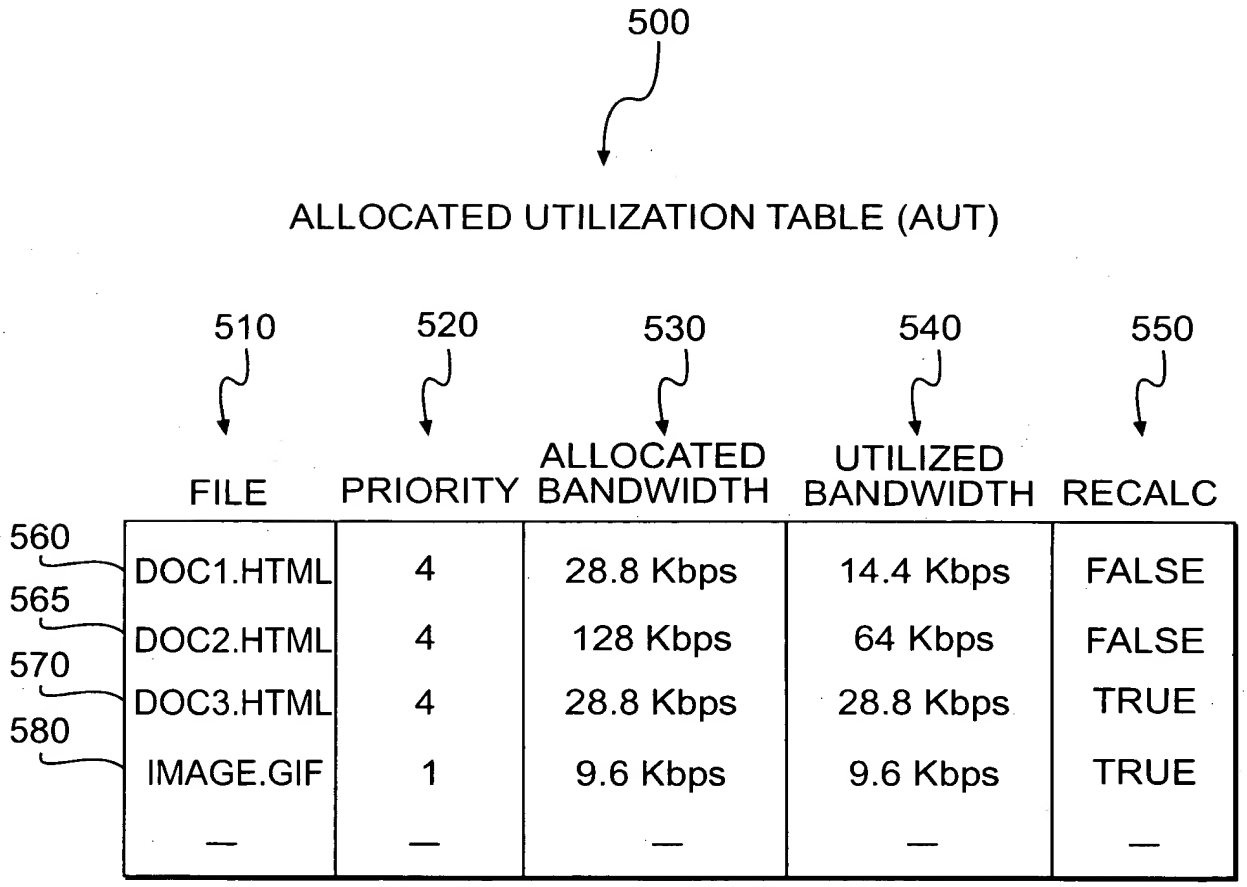
500
ALLOCATED UTILIZATION TABLE (AUT)
510
520
530
540
550
FILE
PRIORITY
ALLOCATED BANDWIDTH
UTILIZED BANDWIDTH
RECALC
560
DOC1.HTML
4
28.8 Kbps
14.4 Kbps
FALSE
565
DOC2.HTML
4
128 Kbps
64 Kbps
FALSE
570
DOC3.HTML
4
28.8 Kbps
28.8 Kbps
TRUE
580
IMAGE.GIF
1
9.6 Kbps
9.6 Kbps
TRUE
—
—
—
—
—

FIG. 5

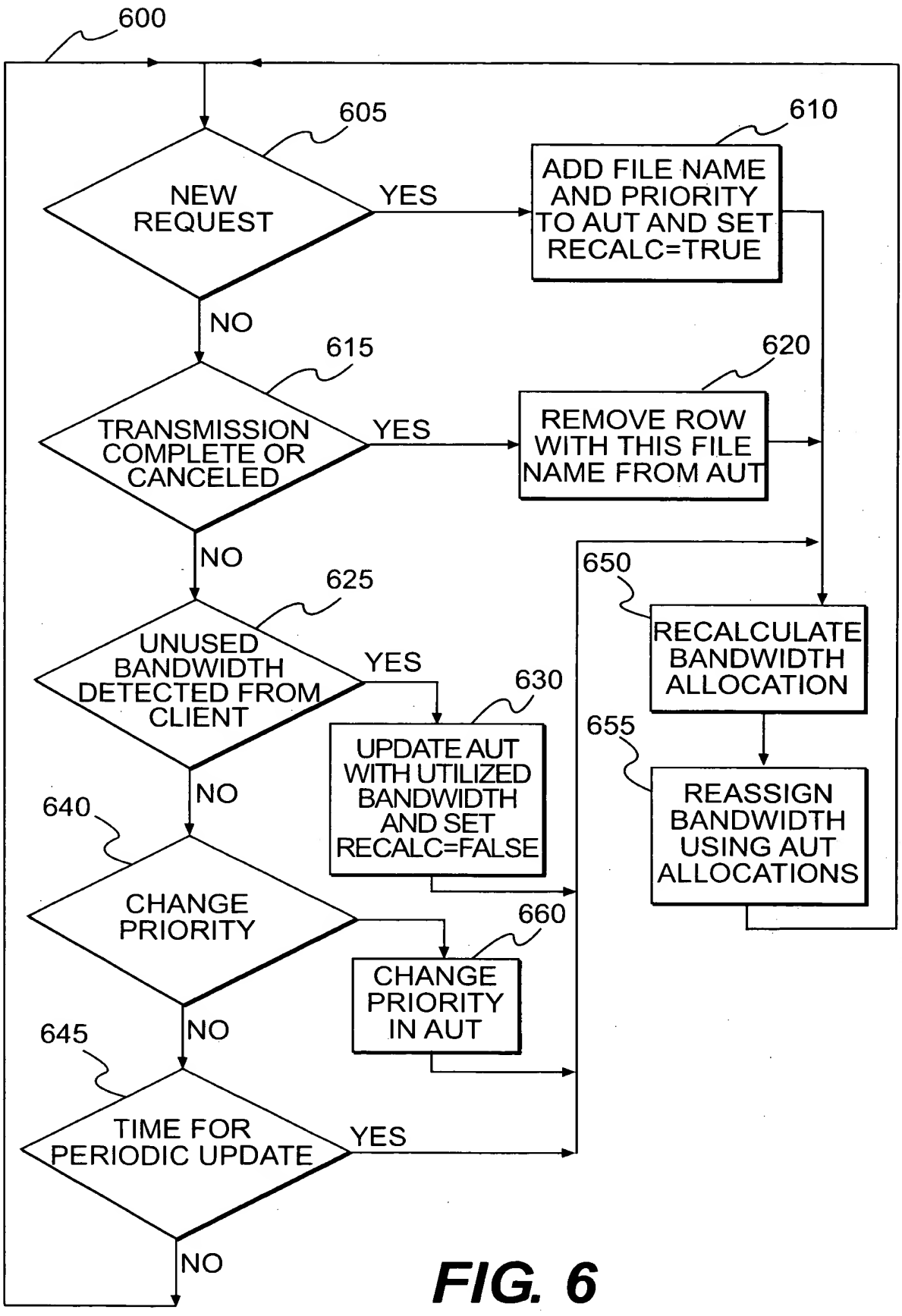
600
605
NEW REQUEST
YES
610
ADD FILE NAME AND PRIORITY TO AUT AND SET RECALC=TRUE
NO
615
TRANSMISSION COMPLETE OR CANCELED
YES
620
REMOVE ROW WITH THIS FILE NAME FROM AUT
NO
625
UNUSED BANDWIDTH DETECTED FROM CLIENT
YES
630
UPDATE AUT WITH UTILIZED BANDWIDTH AND SET RECALC=FALSE
NO
640
CHANGE PRIORITY
660
CHANGE PRIORITY IN AUT
NO
645
TIME FOR PERIODIC UPDATE
YES
NO
650
RECALCULATE BANDWIDTH ALLOCATION
655
REASSIGN BANDWIDTH USING AUT ALLOCATIONS

FIG. 6

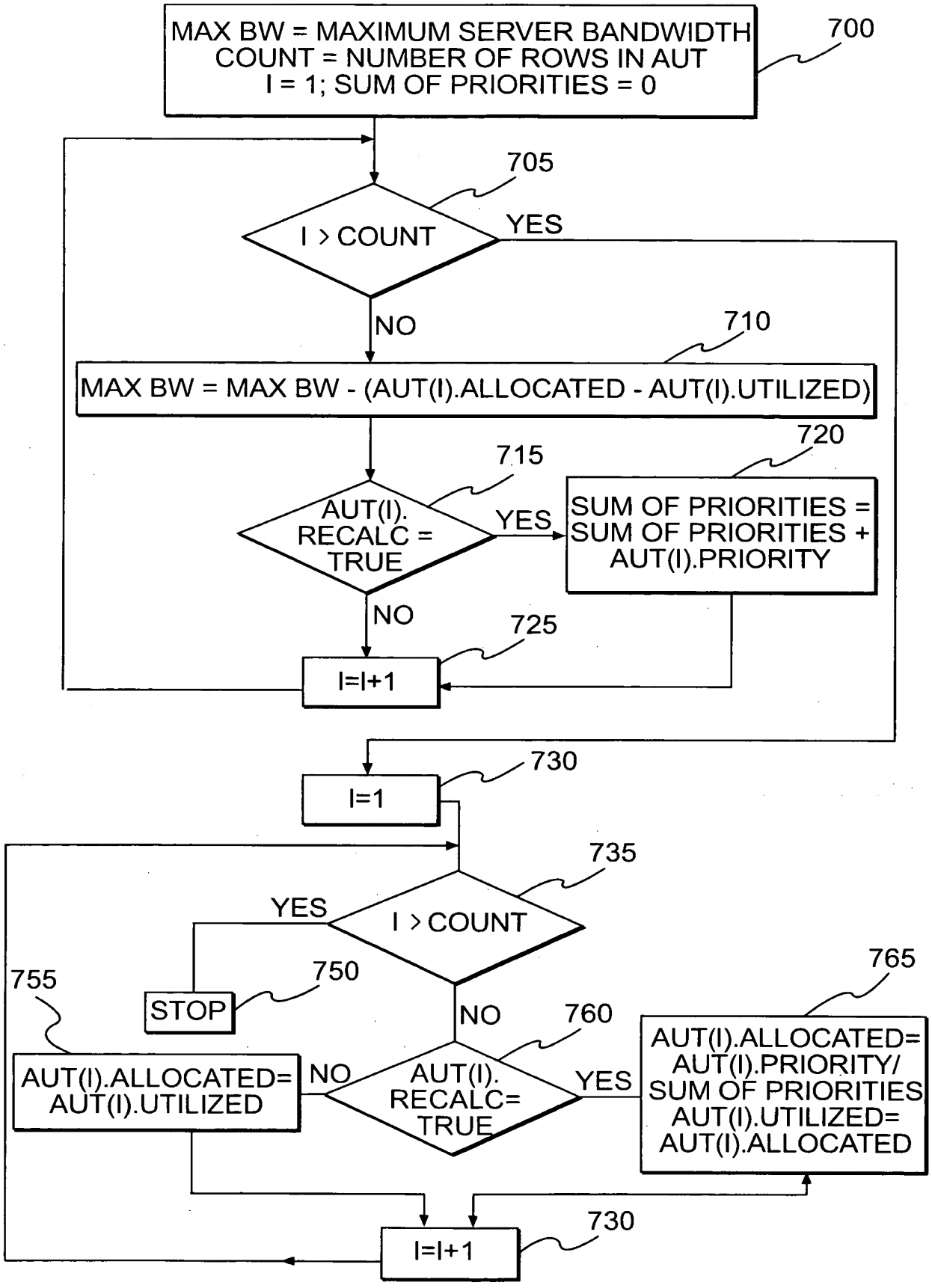
MAX BW = MAXIMUM SERVER BANDWIDTH
COUNT = NUMBER OF ROWS IN AUT
I = 1; SUM OF PRIORITIES = 0
700
705
I > COUNT
YES
NO
710
MAX BW = MAX BW - (AUT(I).ALLOCATED - AUT(I).UTILIZED)
720
715
AUT(I). RECALC = TRUE
YES
SUM OF PRIORITIES = SUM OF PRIORITIES + AUT(I).PRIORITY
NO
725
I=I+1
730
I=1
735
YES
I > COUNT
765
755
750
STOP
NO
760
AUT(I).ALLOCATED= AUT(I).UTILIZED
NO
AUT(I). RECALC= TRUE
YES
AUT(I).ALLOCATED= AUT(I).PRIORITY/ SUM OF PRIORITIES AUT(I).UTILIZED= AUT(I).ALLOCATED
730
I=I+1

FIG. 7A

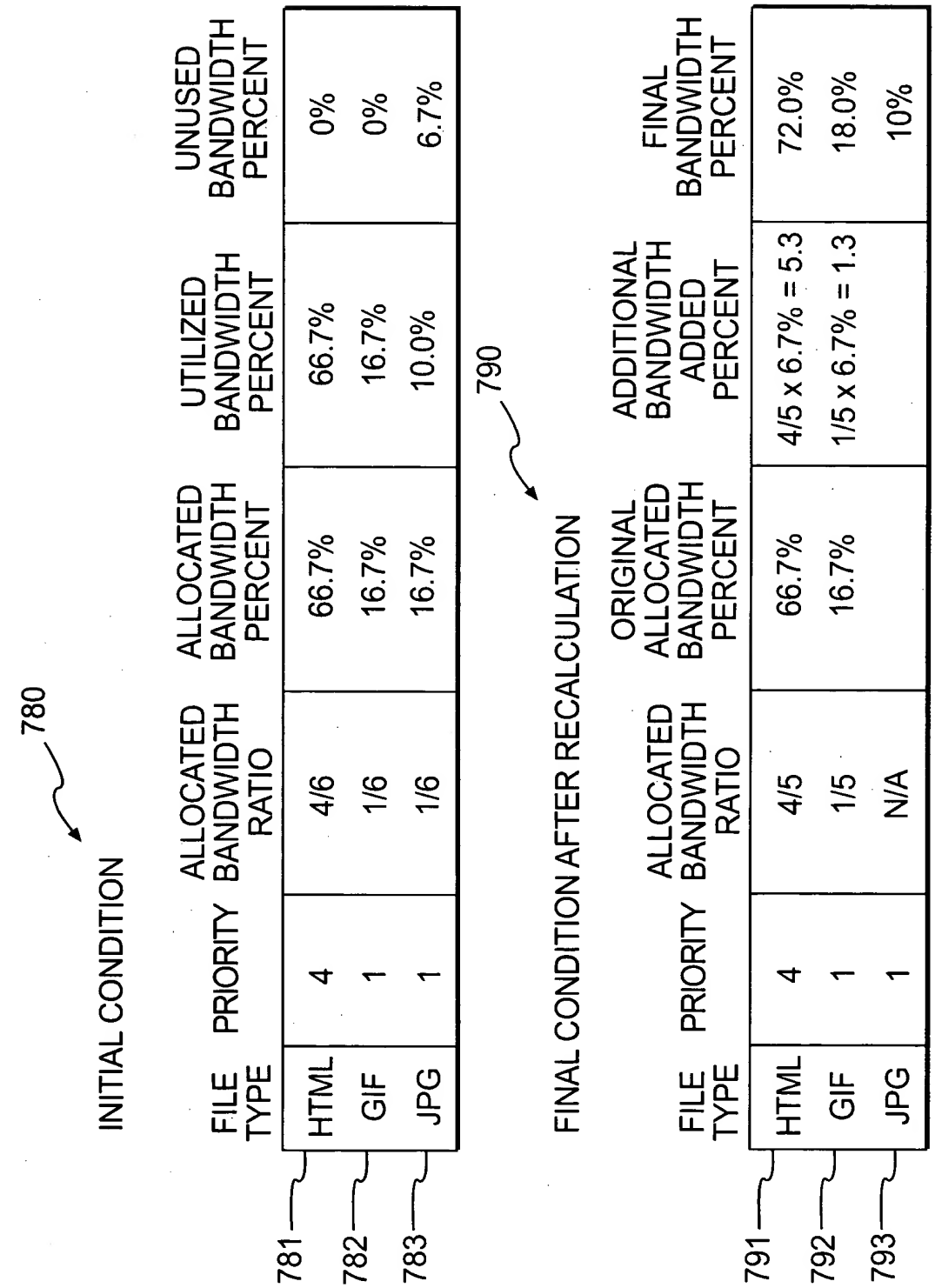
780
INITIAL CONDITION
FILE TYPE
PRIORITY
ALLOCATED BANDWIDTH RATIO
ALLOCATED BANDWIDTH PERCENT
UTILIZED BANDWIDTH PERCENT
UNUSED BANDWIDTH PERCENT
HTML
4
4/6
66.7%
66.7%
0%
GIF
1
1/6
16.7%
16.7%
0%
JPG
1
1/6
16.7%
10.0%
6.7%
781
782
783
790
FINAL CONDITION AFTER RECALCULATION
FILE TYPE
PRIORITY
ALLOCATED BANDWIDTH RATIO
ORIGINAL ALLOCATED BANDWIDTH PERCENT
ADDITIONAL BANDWIDTH ADDED PERCENT
FINAL BANDWIDTH PERCENT
HTML
4
4/5
66.7%
4/5 x 6.7% = 5.3
72.0%
GIF
1
1/5
16.7%
1/5 x 6.7% = 1.3
18.0%
JPG
1
N/A
10%
791
792
793

FIG. 7B

| | 800 ID | 810 BROWSER STATUS | 815 PRIORITY |
|---|---|---|---|
| 820 | A | HAVE FOCUS | 4 |
| 821 | B | NO FOCUS, VISIBLE | 2 |
| 823 | C | NO FOCUS, HIDDEN | 1 |

FIG. 8A

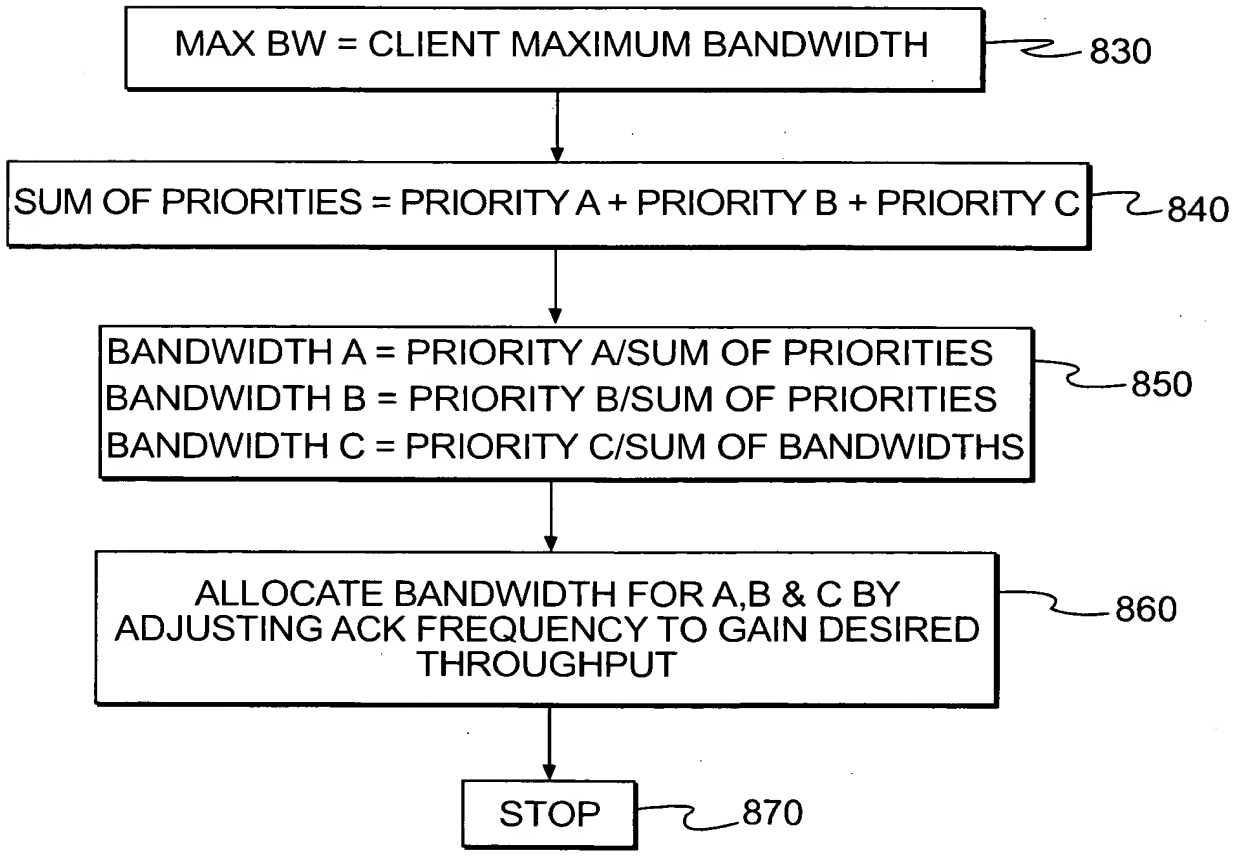


FIG. 8B

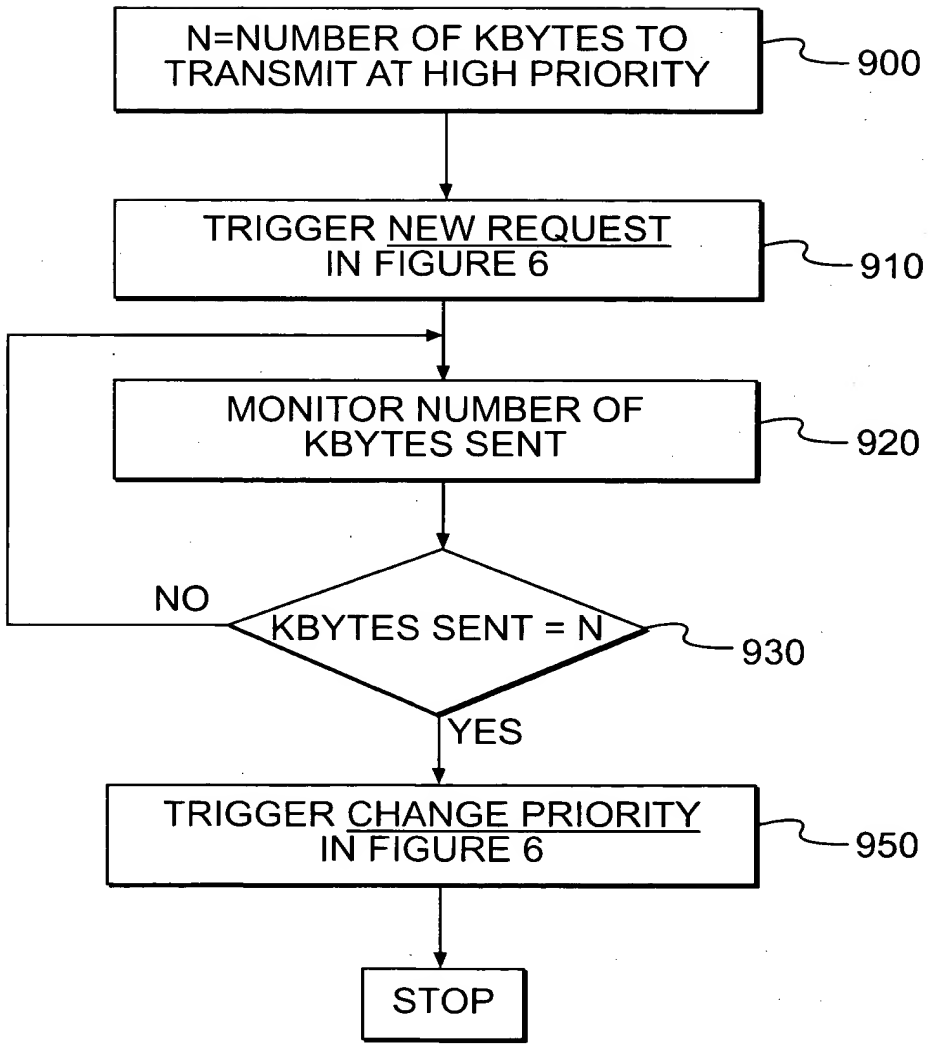
N=NUMBER OF KBYTES TO TRANSMIT AT HIGH PRIORITY
900
TRIGGER NEW REQUEST IN FIGURE 6
910
MONITOR NUMBER OF KBYTES SENT
920
NO
KBYTES SENT = N
930
YES
TRIGGER CHANGE PRIORITY IN FIGURE 6
950
STOP

FIG. 9

| 1000 HTML FILE NAME | 1005 KBYTES NEEDED TO RENDER PAGE 1 |
|---|---|
| 1006 DOC1.HTML | 10 |
| 1007 DOC2.HTML | 15 |
| 1008 DOC3.HTML | 13 |

FIG. 10A

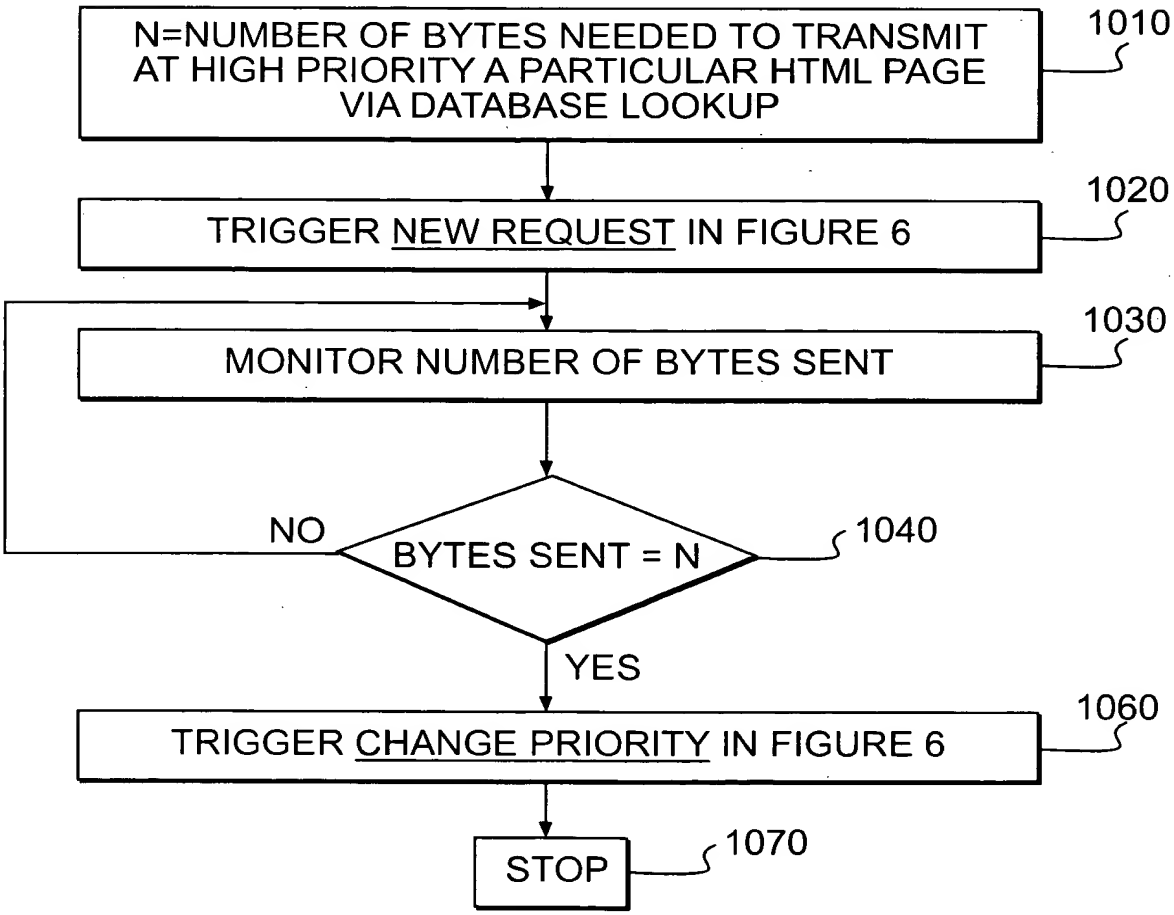


FIG. 10B

| 1100 CUSTOMER PASSWORD | 1105 PRIORITY MULTIPLIER |
|---|---|
| 1106 100/ | 2 |
| 1107 200/ | 3 |
| 1108 300/ | 2 |

FIG. 11A

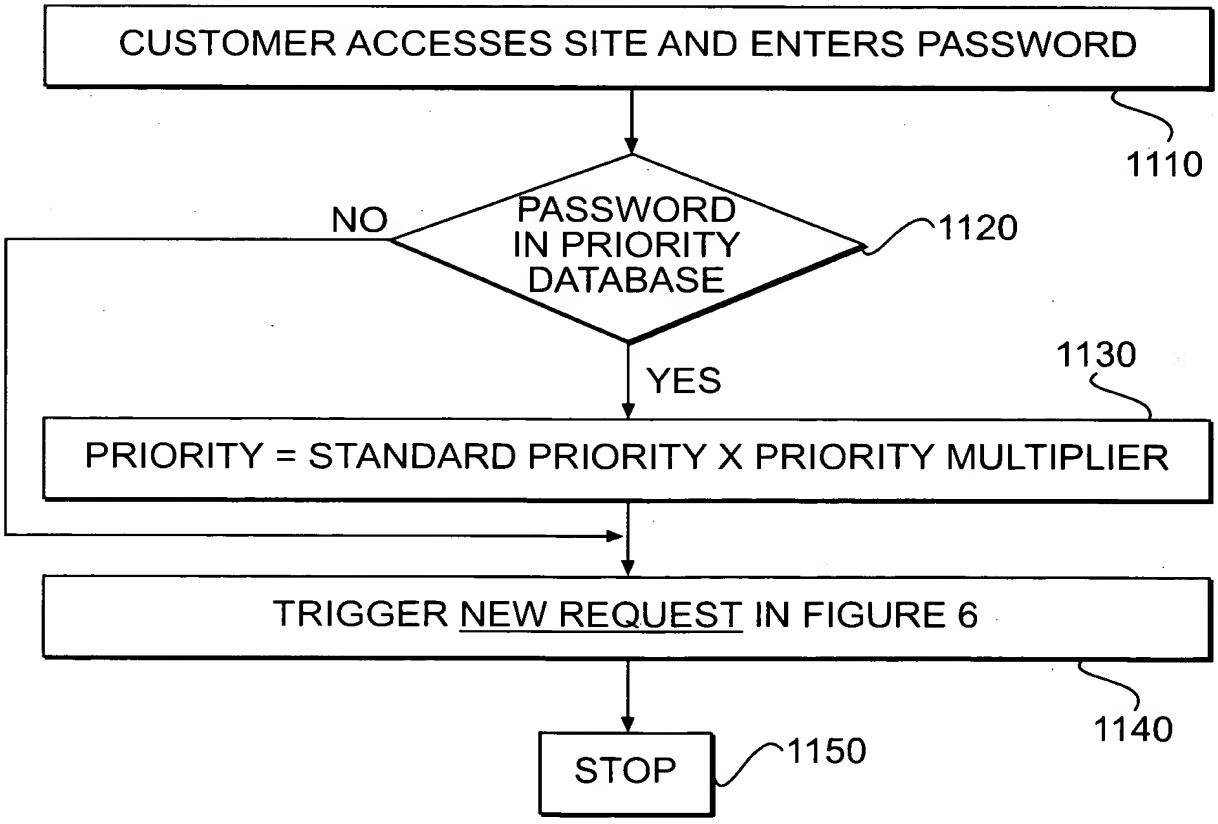


FIG. 11B

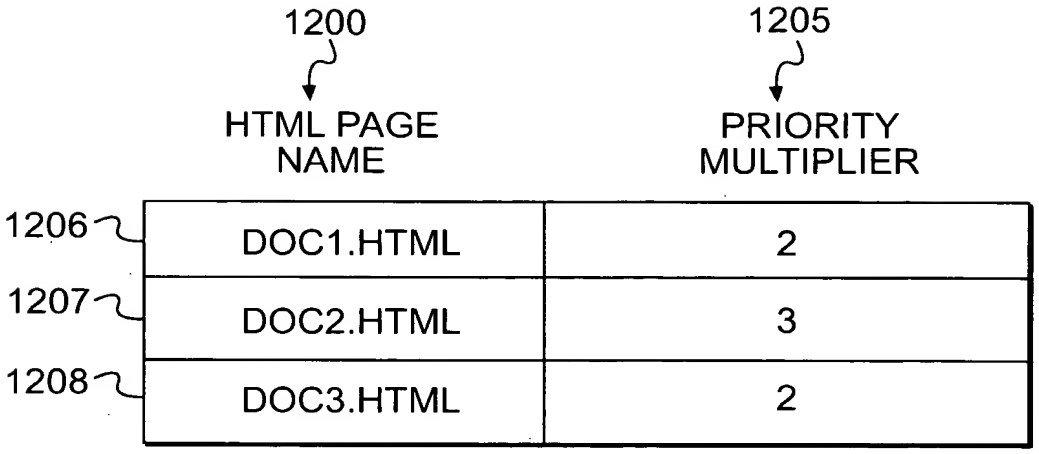


FIG. 12A

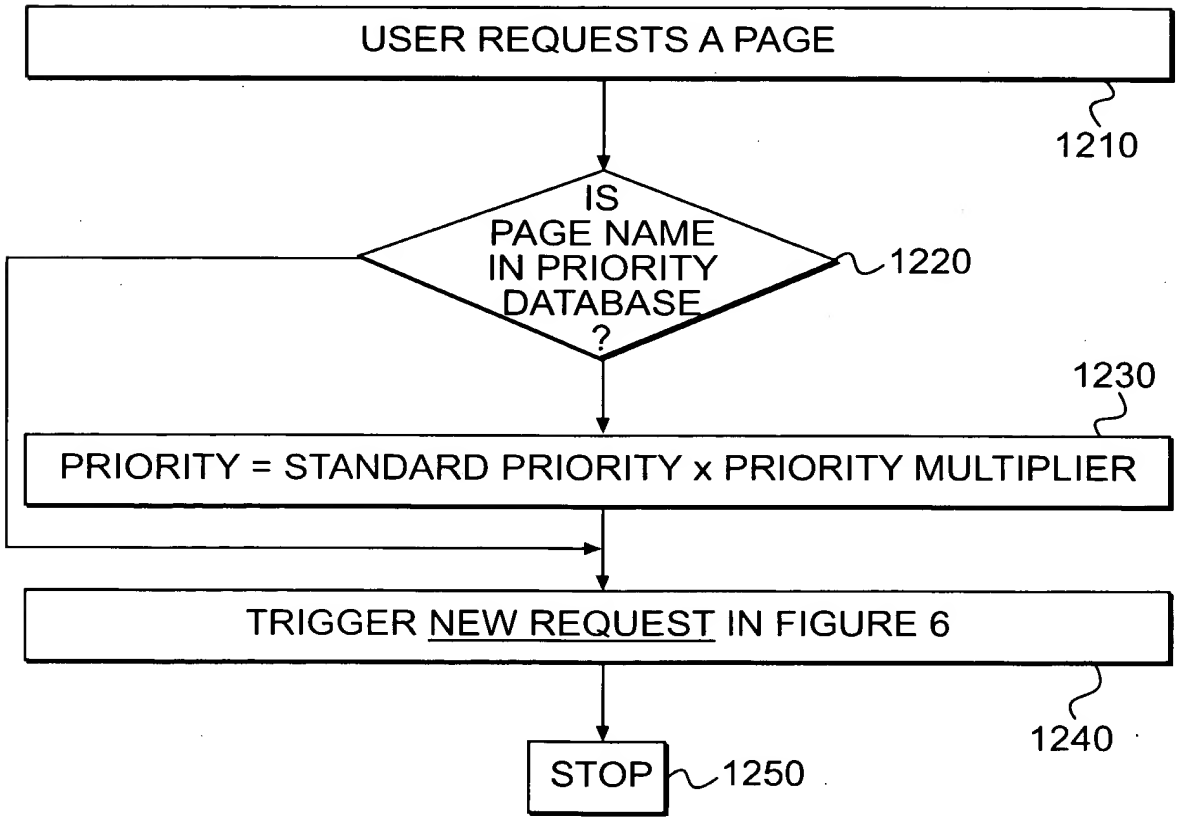


FIG. 12B